

BASIC WEBPAGE LAYOUT

So far in this class we've discussed basic CSS visual styling such as typography (font color, font size, font family, etc) and backgrounds (background colors, background images etc), but now we are going to dive into using CSS as a layout element.

In this lab you are going to take an existing webpage and CSS for an author and some layout elements.

OVERVIEW

Take a moment to open the *author.html* file and *style.css* file into your coding program. If you look at the HTML we have a basic layout that is structured with a `<header>`, `<main>` and `<footer>` and all of the HTML is contained inside a master div with a class of container on it. In this lab you will not be changing this HTML.

Take a moment to look at the CSS and you'll see that the fonts and backgrounds have been set. You'll also see that the *.container* class is set to 800px which is the width of the entire webpage. You can look at a wireframe to see the general layout of everything. In this lab we do not need to edit the existing CSS, although we will add to it.

=== CSS TYPOGRAPHY AND FRAMEWORKS ===

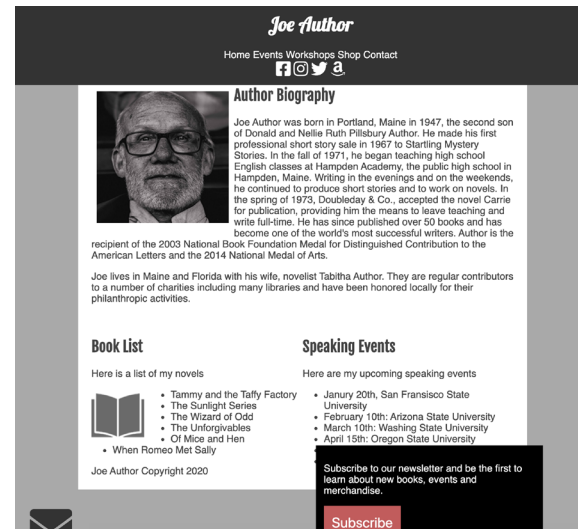
ADD A WEB FONT

One problem that has plagued web developers since the beginning was having a wider range of font choices. Traditional CSS required that the user have a copy of the font installed on their computer, laptop or smart device. Since most people did not have many fonts installed that left designers a limited range of fonts that they could choose from when writing CSS.

Below is the unofficial 'list' of web safe fonts that most designers choosed from.

<https://www.cssfontstack.com/>

Now we have another option to increase the list of fonts we can choose from, it's called a web font. A web font is a font installed by the website for the user, it does require them to install it, it will be installed automatically. The font is only stored temporarily and when the browser is closed it will be erased from the program's cache.



```
<div class="container">
  <header>
    <h1>Joe Author</h1>
    <nav>
      <a href="#">Home</a>
      <a href="#">Events</a>
      <a href="#">Workshops</a>
      <a href="#">Shop</a>
      <a href="#">Contact</a>
    </nav>
  </header>
  <main>
    <article>
      
      <h2>Author Biography</h2>
      <p>
        Joe Author was born in Portland, Maine in 1947, the second son of Donald and Nellie Ruth Pillsbury Author. He made his first professional short story sale in 1967 to Startling Mystery Stories. In the fall of 1971, he began teaching high school English classes at Hampden Academy, the public high school in Hampden, Maine. Writing in the evenings and on the weekends, he continued to produce short stories and to work on novels. In the spring of 1973, Doubleday & Co., accepted the novel Carrie for publication, providing him the means to leave teaching and write full-time. He has since published over 50 books and has become one of the
```

```
/*
Lab: Basics of Layout
=== Do not change CSS below ===
*/

body {
  background-color: darkgray;
  font-size: 14pt;
  font-family: 'Helvetica', sans-serif;
  color: #444;
}

.container {
  width: 800px;
```

There are many services that can do this, but we will use one called Google Fonts. Google fonts provides free use of over 900 font choices.

GOOGLE FONTS

Begin by going to:

<https://fonts.google.com/>

You should see a page that looks roughly like the image on the right. Google fonts allows you to type in custom text and sort fonts by categories including: serif, sans-serif, display and others.

For this lab we will use the search feature. Search for a font called '**Lobster**.' Your page should look roughly like the image on the right. Click on the name and it will show you the entire font, including characters, font creator and styles of the font.

Click the button that says '**Select this style**'. This adds this font to your collection.

Go back and search for our second font called 'Fjalla One' and add it to your collection.

ADD THE GOOGLE FONT TO THE PROJECT

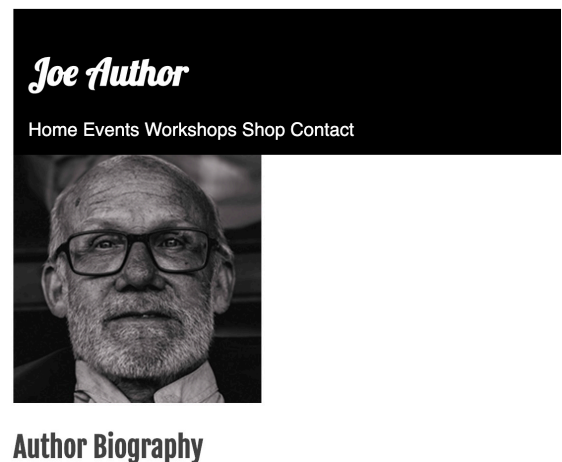
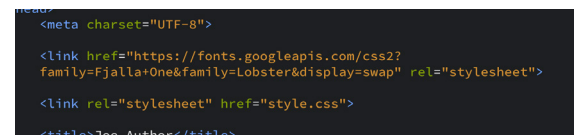
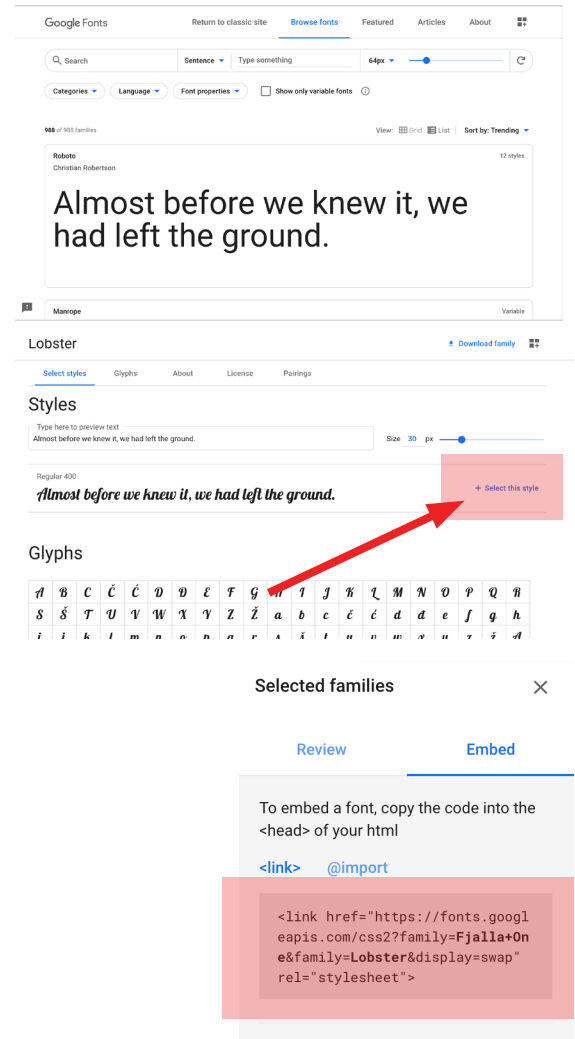
Now that we have our fonts go to the upper right hand side of Google Fonts where it says '**Selected Families**'. Under selected families you can see the fonts you've chosen and removed a font if you don't want it anymore.

Click the option labelled 'embed' and choose the option marked '<link>'. This will give you the HTML code you need to embed the Google fonts into your project. Copy the code and paste it into the <head> section of the *author.html* file.

USE THE FONT

Now that we have installed the Google font, let's call it in our CSS. Go back to the Google font website, under '**Selected Families**', there is a section called '**CSS rules to specify families**'. It will provide you the CSS you need to call the fonts correctly.

In the CSS set the h1 to 'Lobster' and set the h2 to 'Fjalla One'. Save and preview, your page should look roughly like the image on the right.



Joe Author was born in Portland, Maine in 1947, the second son of Pillsbury Author. He made his first professional short story sale in 1

USING AN ICON FONT TO BUILD A SOCIAL MEDIA BAR

As a developer you'll find that you need icons a lot, icons for websites like brand logos, navigation icons like arrows, or other iconography. Rather than having to make a lot of individual images we will use a technique known as an icon font.

An icon font is a font that has icons rather than traditional 'a,b,c' characters.

For this lab we will use a popular icon font called Font Awesome. To learn more about the font itself you can go to:

<https://fontawesome.com/>

For this lab we are going to add a social media bar for the author that goes to his Facebook profile, Twitter profile, Instagram profile and Amazon. We can get these icons from Font Awesome.

For this lab we are going to use something called a content delivery network, or CDN. A CDN is a process where rather than storing the files in YOUR root folder you link to someone else's root folder. This process is nice because then you have less files to deal with.

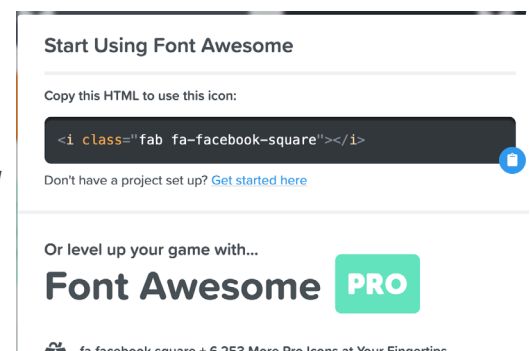
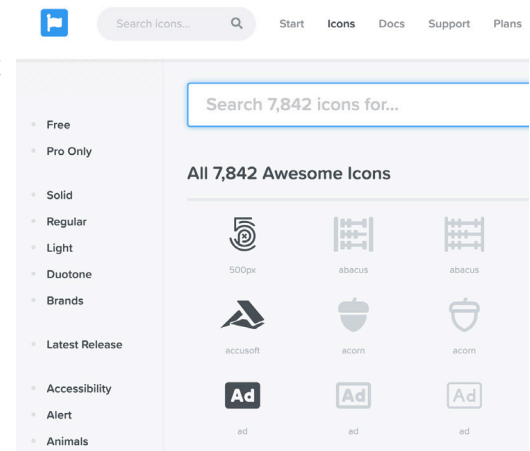
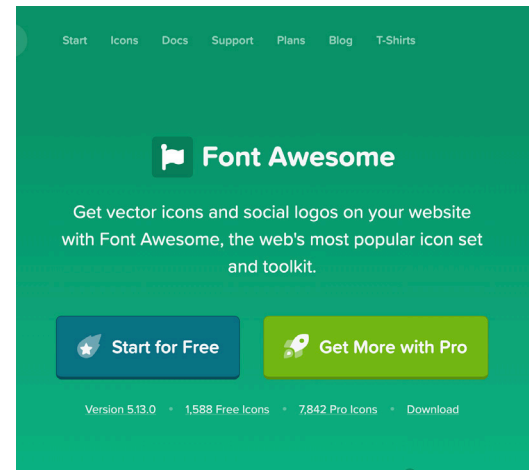
The CDN for font awesome is below. Copy and paste this into the `<head>` section of *author.html*. You can also open the code document marked *code* and copy the code snippet from there.

```
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.13.0/css/all.min.css">
```

Great! That installs Font Awesome into our project. Now we need to know the HTML to produce specific icons. Font Awesome has documentation to show you the HTML code you would need to produce an icon. You can find the official gallery below:

<https://fontawesome.com/icons?d=gallery>

Go to gallery and in the search bar type 'Facebook'. You'll see a result of different Facebook logo icons. Choose the one that has the Facebook logo inside a square. Click the option that says '*Start Using this Icon*'. A page will pop up and highlight the code under where it says, '*Copy this HTML to use this icon*'.



Inside the author.html find the <nav> tag. Create a second <nav> for the social media icons we are going to add. Then paste in the Font Awesome code.

```
<nav>
  <i class="fab fa-facebook-square"></i>
</nav>
```

Wrap the <i> </i> inside an <a> tag to make it a working hyperlink. Have it when someone clicks the icon go to

<https://www.facebook.com>.

```
<nav>
  <a href="https://www.facebook.com"><i
class="fab fa-facebook-square"></i></a>
</nav>
```

Find the icons for Instagram, Twitter and Amazon. Make them links to their respective website.

APPLY CSS

Now that we've added the icons we need to style them. Notice that every Font Awesome <i> tag has a class called .fab applied to them. We can use that to style all of our Font Awesome icons.

Go to the CSS document and add a class called .fab, this will affect all of our icons. We can use CSS typography to edit our icons, let's use font-size and color to set the size and color of the icons.

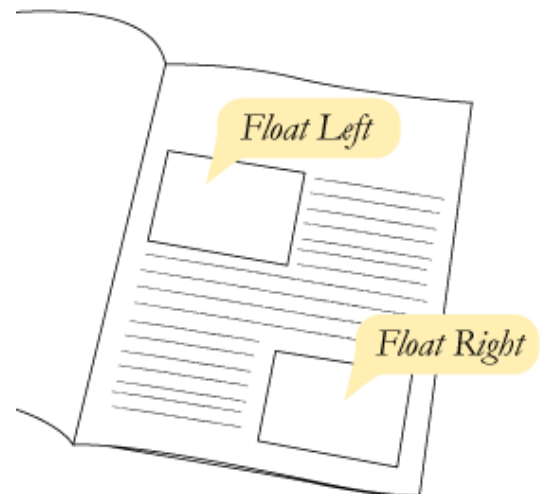
Set the class to a text size of 30pt and a color of white. Save and preview and your image should look roughly like the image on the right.

=== CSS LAYOUT ===

TEXT WRAP

Take a moment to look at the image of the author. You'll see that the image comes first and then the text about the author is below. It would nice if we could have the text wrap around the image. The reason the text wrap can occur is because of block vs inline element.

```
.fab {
  font-size: 24pt;
  color: white;
}
```



BLOCK VS INLINE ELEMENTS

Have you ever wondered why HTML headings like `<h1>`, `<h2>` and `<h3>` stack vertically, but HTML tags like `<a>` like hyperlinks stack horizontally? The answer is because by default HTML tags are either inline elements or block elements. Inline elements like `<a>`, ``, and `` are displayed in the same line, while block elements like `<header>`, `<main>` and `<p>` take up the entire horizontal space, and so they stack vertically.

The reason why text can not wrap around the image is because `<p>` tags default to displayed vertically, so they don't wrap. We are going to change that by using `.floats`.

FLOATS

Floats allow items to be floated to the right or left side of the container they are in. For instance if you have an `` inside a `<section>` the image will be floated to the left or right side of the `<section>`. When you float an HTML item it removes it from the normal layout. The removing allows the HTML below the item to move up in the design. The end result are items that wrap around one another, allowing for more complex layouts.

Create a class called `.floatimage` and tell it to float: left as below:

```
.floatimage {  
  float: left;  
}
```

Apply the CSS class to the image to *author-photo.jpg*. Save and preview and you should notice the text wrapping around the photo of the author.

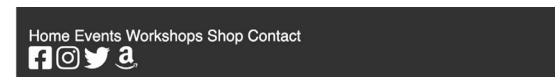
The text is a bit tight up against the photo. To fix this apply *margin-right* and *margin-bottom* to the `.floatimage`. Add about 10px on the right and bottom side.

FLOATS TO CREATE LAYOUT

In addition to simply floating text around an image, we can use floats to create simple column layouts.

In the *Preview.pdf* file you'll see that Book List and Speaking Events are laid out in two columns. We can use floats to create multiple columns.

Look at the HTML file and see that Book List and Speaking Events are broken into two `<section>` tags, each with an ID applied, `#books` and `#events` respectively. To create a two



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cipient of the 2003 National Book Foundation Medal f nerican Letters and the 2014 National Medal of Arts.

column layout we will float the #books section to the left, then we will float the #events section will move up to fill in the available space.

In your CSS create an called #books. Begin by setting a width for the column, lets set it to 400px width. Then apply float:left to set the column to the left side of the page.

```
#books {  
  width:400px;  
  float:left;  
}
```

Then set #events to a width of 400px and float it to the right. The result should look roughly like the image on the right.

You'll notice that the footer containing the copyright moved up. We don't want this wrap and move up. The footer wrapping is also causing the black subscribe section to move up and overlap the book list. To prevent this we'll use an CSS property called clear. Clear tells a browser to stop wrapping an item and look for available space to move the element.

Apply the following to the <footer> in the CSS:

```
footer {  
  clear: both;  
}
```

Save and preview. The clear tells the browser to move the footer to below the floated item, pushing the element down the page.

Finally, let's use floats to wrap the book list around the image of the book. Use #book-icon to float the icon. Use margin-right to help apply space. The result will look like the image on the right

CSS POSITIONING

When a browser lays out HTML it lays it out top --> down, left --> right, meaning the code at the top of the HTML document is displayed first and the code at the end of the HTML document is displayed last.

Sometimes that is not what we want, we may want HTML to always remain at the top of the browser, or at the bottom of the browser. To fix this we can use CSS positioning. CSS positioning allows the developer to set where exactly to place an item, regardless of where it is in the code.

Book List

Here is a list of my novels



- Tammy and the Taffy Factory
- The Sunlight Series
- The Wizard of Odd
- The Unforgivables
- Of Mice and Hen
- When Romeo Met Sally

Subscribe

Speaking Events

Here are my upcoming speaking events

- January 20th, San Fransisco State University
- February 10th: Arizona State University
- March 10th: Washing State University
- April 15th: Oregon State University
- May 20th: Carnegie Mellon University
- June 22nd: City College of San Francisco

Joe Author Copyright 2020

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In *Preview.pdf* you'll notice that at the author's name and navigation is at the top of the page. In this case, we always want the text to remain at the top, even if people scroll to the bottom of the webpage. To fix this we'll use CSS position.

Begin by creating a CSS rule that affects the `<header>`. Set it to position: fixed.

```
header {  
    position: fixed;  
}
```

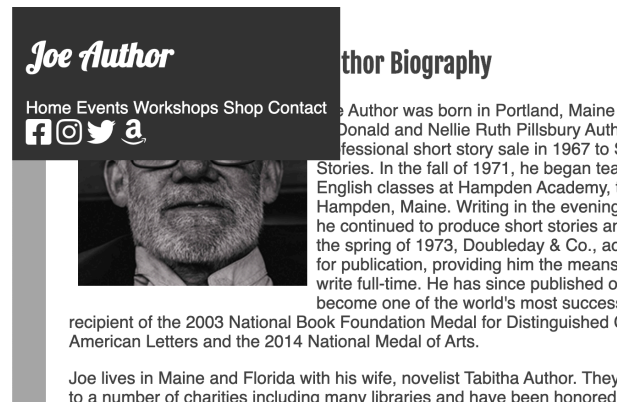
Position fixed means that the item will be placed based on the browser. When we can then use top, bottom, left and right to place the item. For instance, top: 100px would mean place the item 100px from the top of the browser, bottom: 100px would mean place the item 100px from the bottom of the browser.

We want the `<header>` to stay at the top of the webpage so let's set it top: 0px; left: 0px. This will make sure the `<header>` stays at the top-left corner of the webpage.

```
header {  
    position: fixed;  
    top: 0px;  
    left: 0px;  
}
```

Save and preview. You should see it place it at the upper left. However, it's not going across the entire webpage. That's because using CSS position makes HTML elements that are normally block into inline elements. We can fix this by giving the `<header>` a width. Let's set the width to 100% to make the `<header>` go about 100% of the webpage.

```
header {  
    position: fixed;  
    top: 0px;  
    left: 0px;  
    width: 100%;  
}
```



Now that we've laid this out, you'll notice that our header is blocking some of our webpage. That is because once you start to use CSS positioning you create layers, similar to layers in programs like Adobe Photoshop or Adobe Illustrator. So the <header> is now blocking my other material. To fix this we'll push all of the material of the webpage down using padding and body. We can apply padding to the top of the <body> add about 150px.

Save and Preview. Your webpage should look roughly like the one on the right.

Repeat the same process for the #subscribe tab in the page. Use position:fixed to place it at the bottom right side of the webpage.

SUBMISSION





Zip the Author folder into a zip file and submit it via iLearn. Please make sure to include all necessary files.


EXTRA CREDIT

(not required, worth 5 points)

The author wants to add an email icon at the lower right hand left hand side of page that when clicked goes to joeauthor@mail.com.

Use the font icon to create an email icon and use position: fixed to keep the icon sticky to the bottom left side of the webpage.

Joe Author
Home Events Workshops Shop Contact







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